

Appl. No.: 10/541,085
Reply to Office Action of: 07/10/2008

REMARKS

Claims 8, 9, and 19 were objected to for various informalities. The claims have been amended above to address the examiners concerns. In particular, in regards to the claim objection to claim 8, the amendment to claim 1 means that claim 8 now limits the subject matter of claim 7. In regards to claim 9, the phrase "the first set of indicia are alphabetic indicia" has been amended to "a second set of indicia are alphabetic indicia". In regards to claim 19, the claim now recites "transflective" in place of the term "transreflective".

Claims 1, 3, 19, and 20 were rejected under 35 U.S.C. §112, second paragraph, for various limitations lacking antecedent basis. The claims have been amended above to address the examiner's concerns. In particular, claim 1 has been amended to recite "a display controller operable to control the continuous flexible display film". This was done to improve the clarity of the claims. Support for this amendment is found at page 8 lines 17 to 23 of the specification.

Claims 1, 3, 5-10, 15, 16, and 20 were rejected under 35 U.S.C. §102(a) as being anticipated by Yamazaki et al. (US 2002/0034930). Claim 11 was rejected under 35 U.S.C. §103(a) as being unpatentable over Yamazaki et al. (US 2002/0034930) in view of Gutowitz (US 6,219,731). Claims 14, 17, and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Yamazaki et al. (US 2002/0034930) in view of Ostergard et al. (US 6,704,004). Claim 19 was rejected under 35 U.S.C. §103(a) as being unpatentable over Yamazaki et al. (US

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2002/0034930). The examiner is requested to reconsider these rejections.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). It is submitted that Yamazaki fails to teach each and every element as set forth in claims 1 and 16 for at least the reasons described below.

Embodiments of the invention are directed to a fixed array of travelling key elements with separate outer pads, a set of switches and a continuous flexible display film which extends under all the key elements and over the switches. The display film supports the key elements. The key elements comprise a separate outer pad and are capable of being moved by a user. Such movement causes the key element to bear against the display film, causing the display to flex. This results in the actuation of a switch.

Yamazaki discloses a keypad comprising a number of buttons each located above a separate non-flexible electro-luminescent (EL) display device (604). The EL display devices (604) are located on the top surface of a support structure comprising a flexible printed substrate layer (605) and a flexible sheet (607). This combination of the EL display devices and support structure forms a compound structure. The examiner alleges that this compound structure discloses the "flexible display" currently recited in claim 1.

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In order to avoid this interpretation, applicants have amended claim 1 to recite the following features:

a keypad comprising a continuous flexible display film configured to:

i) present a plurality of controllable pixels under each of the mechanical key elements; and

ii) position the set of mechanical key elements for user actuation.

Support for this amendment is found at page 6, lines 4 to 6 and 9 to 11 of the specification.

Feature i) distinguishes the claims from Yamazaki. Feature i) is not disclosed by the compound structure, the support structure or the EL display device of Yamazaki.

The compound structure of Yamazaki comprises a number of EL display devices (604), located at intervals along the top surface of a layered support structure comprising flexible wiring (606), a flexible printed substrate (605) and a flexible sheet (607). The compound structure of Yamazaki therefore fails to disclose "a keypad comprising a continuous flexible display film configured to present a plurality of controllable pixels under each of the mechanical key elements". The presence of the EL display devices mean that the compound structure is not a film.

The support structure of Yamazaki may be considered to disclose a film. The support structure, however, does not comprise a display and so fails to disclose "a keypad

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comprising a continuous flexible display film configured to present a plurality of controllable pixels under each of the mechanical key elements".

The EL display devices of Yamazaki are non-flexible and are each located beneath only one button. The EL display devices therefore fail to disclose "a keypad comprising a continuous flexible display film configured to present a plurality of controllable pixels under each of the mechanical key elements".

Therefore, Yamazaki fails to disclose feature i).

Feature ii) further distinguishes the claims from Yamazaki. Yamazaki discloses that the EL display devices each serve one button. Each EL display device is only in contact with one button and has no effect in the positioning of any other button. Yamazaki fails to disclose a display film which is "a keypad comprising a continuous flexible display film configured to position the set of mechanical key elements for user actuation".

Yamazaki fails to disclose either of features i) and ii). Thus, amended claim 1 is novel over Yamazaki.

Additionally, applicants submit that there would be no motivation for the skilled person to seek to adapt the teaching of Yamazaki to arrive at the claimed invention. The description in Yamazaki discloses that the substrate and sheet upon which the EL display device is located are both described as being "flexible". The EL display device itself however is not disclosed as being flexible. This suggests that the EL

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display device is not flexible and that the substrate and sheet are required to provide the required flexibility. This interpretation is supported by figure 3B.

Any attempt to adapt the teaching of Yamazaki to disclose "a continuous flexible display film, extending beneath the set of mechanical key elements and over the set of switches and configured to position the set of mechanical key elements for user actuation and to present a plurality of controllable pixels under each of the mechanical key elements" as recited by amended claim 1, would require a total restructuring of the device. The non-flexible discrete EL devices would have to be replaced with a continuous flexible display film. This would remove the need for the support structure. There is no teaching or suggestion in Yamazaki that such a restructuring of the device would be desirable.

The features of claim 1 are not disclosed or suggested in the art of record. Therefore, claim 1 is patentable and should be allowed.

Applicants have amended claim 19 to recite, *inter alia*, "wherein the continuous flexible display film is a transfective continuous flexible display film". Applicants submit that Ouderkirk (US 6,124,971) does not teach or disclose a flexible display film as claimed in applicants' claimed invention. Applicants' attorney hereby challenges the examiner's "Official Notice" mentioned on page 12 of the office action mailed 07/10/2008. In accordance with MPEP §2144.03 the examiner is requested to cite a reference in support of his position.

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Though dependent claims 3, 5-11, 14, 15, and 20 contain their own allowable subject matter, these claims should at least be allowable due to their dependence from allowable claim 1. However, to expedite prosecution at this time, no further comment will be made.

Applicants have amended claim 16 to recite, *inter alia*, "wherein the display device comprises a light emissive layer extending underneath the plurality of mechanical key elements and over the plurality of switches". This is novel over Yamazaki which discloses a number of EL display devices located on the top surface of a support structure. Yamazaki fails to disclose "wherein the display device comprises a light emissive layer **extending underneath the plurality of mechanical key elements** and over the plurality of switches".

Additionally, similar to the arguments presented above with respect to claim 1, any attempt to adapt the teaching of Yamazaki to disclose the features of amended claim 16 would require a similar restructuring as described above.

The features of claim 16 are not disclosed or suggested in the art of record. Therefore, claim 16 is patentable and should be allowed.

Though dependent claims 17 and 18 contain their own allowable subject matter, these claims should at least be allowable due to their dependence from allowable claim 16. However, to expedite prosecution at this time, no further comment will be made.

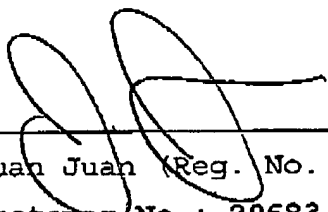
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Claims 21-23 have been added above to further claim the features recited therein.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record. Accordingly, favorable reconsideration and allowance is respectfully requested. If there are any additional charges with respect to this Amendment or otherwise, please charge deposit account 50-1924 for any fee deficiency. Should any unresolved issue remain, the examiner is invited to call applicants' attorney at the telephone number indicated below.

Respectfully submitted,



Juan Juan (Reg. No. 60,564)

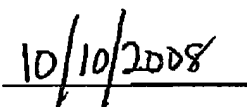
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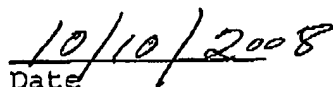
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